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(54) METHOD AND APPARATUS FOR PROTECTING MODULAR IMPLANT CONNECTION

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See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

3,818,514 A 6/1974 Clark 3,918,441 A 11/1975 Getscher (Continued)

OTHER PUBLICATIONS

"Restoration® Modular Revision Hip System, Product Reference Guide for Cone/Conical and Broached/Fluted & Plasma Implants and Instruments," brochure, (2004) Stryker, pp. 1-12.

(Continued)

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(57) ABSTRACT

Apparatus and methods of protecting modular implant connection portions are provided. A guard includes an outer sidewall and an inner sidewall defining a cavity that covers a modular implant connection portion. The modular implant connection covered with the guard can facilitate test-fitting of other modular implant components and allows reaming of the tissue around the guard.

11 Claims, 7 Drawing Sheets

